



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,387	08/16/2006	Jenni Haapiainen	27058U	9507
20529	7590	10/26/2009		
THE NATH LAW GROUP 112 South West Street Alexandria, VA 22314			EXAMINER O HERN, BRENT T	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			10/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/555,387

Applicant(s)

HAAPAIINEN ET AL.

Examiner

Brent T. O'Hern

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-12 and 14-15 in the reply filed on 7/20/2009 is acknowledged. The traversal is on the ground(s) that there is no serious burden on the Examiner to examine all of the inventions in the application and the Examiner has powerful search engines. This is not found persuasive because as made of record there is no single general inventive concept and the product does not provide a contribution over the prior art.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 14-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims directed towards the use of material are non-statutory subject matter in U.S. patent practice.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-12 and 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The phrase "particles containing non-starch polysaccharides with an improved solubility as the product is contacted with dissolving mediums" in claim 1, lines 8-9 is vague and indefinite since it unclear what are dissolving mediums, the specific solubility when contacted with dissolving mediums and whether the basis is vegetable material without being subject to any processing or is the comparison based on any and all possible processing steps.

5. Regarding claim 3, line 3, and claim 8, lines 4-5 the phrases "such as" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4, lines 2-3 and claim 5, lines 3-4 recite the broad recitation "a particle size less than 50 μm ", and the

claim also recites "less than 20 μm " which are the narrower statements of the range/limitation.

Clarification and/or correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-11 and 14-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Camburn (US 5,552,175).

Regarding claims 1-2, 4-5 and 14-15, Camburn ('175) teaches a method for treating a vegetable material that improves the solubility of the non-starch polysaccharides contained in it, where the material including aleuron which is crushed by using mechanical energy in an amount of 0.15-0.39 kWh/kg to a particle size less than 100 μm /(50 μm), at least a major portion of the cells containing non-starch polysaccharides in the material being damaged during crushing, to produce particles containing non-starch polysaccharides with an improved solubility as the product is contacted with dissolving mediums (*See claims 1-8 and 12, col. 2, ll. 19-51, col. 2, l. 62*

to col. 3, l. 16 and col. 7, ll. 4-11. The mechanical energy is 0.16 kWh/kg. The vegetable material is wheat/barley. *Particles having a size of less 100 μm /(50 μm) includes values of zero, which are non limiting. The aleuron is the boundary material between the pericarp and the endosperm in the above material.)* and inherently teaches the particles containing non-starch polysaccharides with an improved solubility as the product is contacted with dissolving mediums and at least a major portion of the non-starch polysaccharides contained in the cells end up in particles as produced by the crushing with a particle size smaller than that of the respective initial cell of the non-starch polysaccharide (See claim 1 and col. 7, ll. 4-11 where Camburn ('175) teaches the milled material having particle size less than 200 μm which is interpreted as having high improved solubility in liquids with the above dimensions.).

In the alternative, a person having ordinary skill in the art would obviously appreciate or provide particles having the above properties in order to provide a drink with excellent functional properties, smooth mouth feel and body (See col. 7, ll. 4-11 and col. 2, ll. 28-36.). Thus, a rejection under 35 USC 102/103 is proper (See MPEP 2112.).

Regarding claim 3, Camburn ('175) teaches the material to be crushed being barley (See col. 5, ll. 33-36.).

Regarding claim 6, Camburn's ('175) material has improved solubility of betaglucan or pentosan since milling the solid material reduces the particle size, thus, improving the solubility (See claim 1, col. 5, ll. 33-36 and col. 7, ll. 4-11 where Camburn ('175) teaches the milled material which includes the above materials with the above

particle size which is less than 200 μm which is interpreted as having high improved solubility with the above dimensions. The claims do not specify the basis for improved solubility.).

Regarding claim 7, Camburn's ('175) material is known to inherently contain amylopectin or barley (*See claim 1, col. 5, ll. 33-36 and col. 7, ll. 4-11.*).

Regarding claim 8, Camburn ('175) teaches that the material to be crushed contains amylopectin or a material rich in amylopectin mixed with another biological material containing non-starch polysaccharides, such as oat grains or their fractions (*See claim 1, col. 5, ll. 33-36 and col. 7, ll. 4-11.*).

Regarding claim 9, Camburn ('175) the mechanical energy is generated by the joint effect of heat, pressure and shearing forces (*See claims 1-8 and 12, col. 2, ll. 19-51, col. 2, l. 62 to col. 3, l. 16, col. 6, ll. 36-46 and col. 7, ll. 4-11.*).

Regarding claim 10, Camburn ('175) teaches the crushing being preformed by extrusion (*See claims 1-8 and 12, col. 2, ll. 19-51, col. 2, l. 62 to col. 3, l. 16 and col. 7, ll. 4-11.*).

Regarding claim 11, Camburn ('175) teaches that the material to be crushed is pre-treated to moisture in the range from 6 to 20% (*See col. 6, ll. 36-46.*).

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Camburn (US 5,552,175) in view of Lehtomaki et al. (US 5,106,640).

Camburn ('175) teaches the method discussed above, however, fails to expressly disclose that the material to be crushed is mixed with a greater amount of liquid medium and the mixture is homogenized under a pressure of 50 to 800 bar.

However, Lehtomaki ('640) teaches homogenizing material such as barley or oats rapidly (*See col. 2, ll. 24-40.*) for the purpose of providing high yielding product (*See col. 2, ll. 24-40.*). Regarding the homogenizing pressure, it would have been obvious to one having ordinary skill in the art to adjust the amount of pressure to the above value for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to homogenize Camburn's ('175) material as taught by Lehtomaki ('640) in order to provide high yielding product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571)272-0496. The examiner can normally be reached on Monday-Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brent T. O'Hern/
Examiner, Art Unit 1794
October 23, 2009